

December 8, 1999

MEMORANDUM

TO: Orville D. Green, Administrator
State Air Quality Program

FROM: Zach Klotovich, Air Quality Engineer *ZK*
Technical Services Program Office

THROUGH: Daniel Salgado *DS*
Lead Process Engineering
Technical Services Program Office

SUBJECT: T2-990004, Thompson Creek Mining Company, Clayton
Amendment to Tier II Operating Permit No. 037-00001

PROJECT DESCRIPTION

This project is for the issuance of an amended Tier II Operating Permit (OP) for Thompson Creek Mining Company located near Clayton, Idaho. This Permit amendment incorporates the requirements of Permit to Construct No. 037-00001, issued on March 3, 1999. Most of the permit changes requested in this amendment are clerical in nature in order to clarify terms and conditions of the Permit. This Permit replaces the Tier II OP issued on February 25, 1997 and the PTC issued on March 3, 1999.

DISCUSSION

On August 9, 1999, DEQ received an application for a Tier II OP amendment from TCMC. On September 9, 1999, the application was declared complete. On September 16, 1999, DEQ received a letter containing a verification procedure for sulfur content in diesel fuel. On October 13, 1999, DEQ received payment of the permit amendment fee.

FEES

Fees apply to this facility in accordance with IDAPA 16.01.01.470. The facility is subject to permit application fees of \$500 for this revised Tier II OP.

RECOMMENDATIONS

Based on the review of the application materials, and all applicable state and federal regulations, the Program recommends that DEQ issue an amended Tier II OP to Thompson Creek Mining Company. A public comment period is not required, in accordance with IDAPA 16.01.01.404.04, because allowable emissions are not increasing.

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cc:	P. Rayne/AFS	R. Wilkosz, AQPO
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Technical Services Program Office

SUBJECT: T2-990004, Thompson Creek Mining Company (TCMC), Clayton
Technical Analysis for Amendment to Tier II Operating Permit No. 037-00001

PURPOSE

The purpose for this memorandum is to satisfy the requirements of IDAPA 16.01.01 Sections 404.04 (Rules for the Control of Air Pollution in Idaho) (Rules) for Tier II Operating Permits.

SUMMARY OF EVENTS

On August 9, 1999, DEQ received an application for an amended Tier II OP from TCMC. On September 9, 1999, the application was declared complete. On September 16, 1999, DEQ received a letter containing a verification procedure for sulfur content in diesel fuel. On October 13, 1999, DEQ received payment of the permit amendment fee.

FACILITY DESCRIPTION

Thompson Creek Mining Company operates an open pit molybdenum mine and concentrator at Thompson Creek in Central Idaho. Processes at the facility include mining, crushing, grinding, separation by "flotation," dewatering, product packaging and shipping, tailings discharge, and water reclaim. Various support facilities such as a laboratory, maintenance shops, warehouses, and sewage treatment also exist.

PROJECT DESCRIPTION

This project is for the issuance of an amended Tier II Operating Permit (OP) for Thompson Creek Mining Company's (TCMC) facility located near Clayton, Idaho. The amendments made to this permit were requested by TCMC and agreed to in a July 8, 1999, meeting between DEQ and TCMC. See letter (in source file) to Kent Watson dated July 23, 1999.

Most of the permit changes requested in this amendment are clerical in nature in order to clarify terms and conditions of the Permit. This Permit amendment also incorporates the requirements of Permit to Construct No. 037-00001, issued on March 3, 1999. Changes made to the Permit include:

- Updating the Tier II Permit by incorporating Sections of the Permit that were modified in the March 3, 1999, PTC.
- Replacing the opacity determination method in several sections of the Permit as follows - Opacity will be determined using DEQ's "~~Procedures Manual for Air Pollution Control~~" U.S. EPA Reference Method 9.

- Replacing, where appropriate, the terms "weekly", "monthly", and "annually" with "calendar week," "calendar month," and "consecutive 12-months," respectively.
- Separating the emission limits for the Boiler #1 and Hot Oil Boiler #1 because they do not have a common stack.
- Replacing "~~change in pressure~~" with "pressure drop" for the Holoelite Dryer #2 and rotary kiln venturi scrubbers.
- Adding that the reporting required in Section 4.3 of the Holoelite Dryer #2 and Rotary Kiln "shall be postmarked within 30 days following the end of the 2nd and 4th calendar quarters," in accordance with NSPS requirements.
- In the Jet Mill & the MoS₂ Packaging Area permit:
 - replacing "Jet Mill Baghouse-Stack" with "jet mill baghouse stack"
 - replacing Section 1.7, which limited emissions from process equipment to 10% opacity, with the requirement that "Fugitive emissions shall not be visible outside the building which houses this process, as determined by EPA Reference Method 22," since TCMC requested this change, and it is more stringent.
 - In order to keep the units for operating and monitoring requirements the same, replacing 'tons' with 'pounds' in Section 3.1.
- In the Super Fine Grade Molybdenum Production Circuit permit:
 - replacing 'mill feed bin' with 'pancake mill feed bin',
 - replacing 'or' with 'and' in Sections 1.1 and 1.2
 - replacing 'Super Fine Molybdenum storage bin' with 'super fine molybdenum storage bin',
 - replacing Section 1.7, which limited emissions from process equipment to 10% opacity, with the requirement that "Fugitive emissions shall not be visible outside the building which houses this process as determined by EPA Reference Method 22" since TCMC requested this change and it is more stringent
 - replacing Section 2.3 with, "Pressure drop across the particulate matter control devices shall not fall below the range of the average low pressure drop of the performance test runs demonstrating compliance with Section 1.1 and 1.2. Pressure drop across the particulate matter control devices shall not exceed manufacturer's specifications for the upper pressure drop. Documentation of the operating pressure drop specifications for the baghouse shall remain on site at all times, and shall be made available to DEQ representatives upon request." The requirements were agreed to verbally by TCMC and DEQ.
- In the Pebble Lime Baghouse permit: replacing 'Pebble Lime Baghouse' with 'pebble lime baghouse'.
- On September 16, 1999, DEQ received a proposed procedure for verification of sulfur content in diesel fuel from TCMC. DEQ agrees that there is an acceptable chain of record for fuel oil sulfur content from the refinery to the vendor. Fuel oil sulfur content verification was changed to quarterly analyzation by TCMC from supplier verification of each load. This change is allowable because none of TCMC's boilers or generators are NSPS applicable. The Boiler #1, Hot Oil Boiler #1, and Mctivator are not applicable because they were installed prior to 1989. The mill auxiliary generator and pumpback generator are less than 10 MMBtu/hr in size.
- Since TCMC must still comply with the fuel sulfur limits for both ASTM Grade #1 and ASTM Grade #2 fuel oil, TCMC must determine the allowable sulfur content of the fuel in the storage tanks each time a tank is sampled using the following equation:

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$$\text{Sulfur Content} = \left(\sum_{i=1}^n ((X_i * 0.3) + (Y_i * 0.5)) * G_i \right) \div \sum_{i=1}^n G_i$$

Sulfur Content	=	Allowable weight percent sulfur in tank
n	=	Number of fuel loads delivered during the quarter following the last test
X _i	=	Percent grade #1 fuel oil in load i
0.3	=	Allowable weight percent sulfur in grade #1 fuel oil
Y _i	=	Percent grade #2 fuel oil in load i
0.5	=	Allowable weight percent sulfur in grade #2 fuel oil
G _i	=	Gallons in load i

For example:

Load 1	-	80% #1, 20% #2, 1000 gallons
Load 2	-	50% #1, 50% #2, 500 gallons

$$[(0.8 * 0.3) + (0.2 * 0.5)] * 1000 \text{ gallons} = 30$$

$$[(0.5 * 0.3) + (0.5 * 0.5)] * 500 \text{ gallons} = 20$$

$$30 + 20 = 50$$

$$50 / (1000 + 500) = 0.36 \text{ Allowable Weight Percent Sulfur}$$

- In the Pumpback Generator permit: replacing 'Pumpback Generator' with 'pumpback generator', and in Section 3.2, replacing the incorrect 'Motivator' with the correct 'pumpback generator'.
- Removing the source test requirements for the lube grade dryer stack, jet mill baghouse stack, storage bin baghouse stack, and pancake mill feed bin baghouse from the Permit because the source tests have been performed and accepted by DEQ. By removing the source test requirements from the Permit, confusion over source test dates will be avoided. The dates of performance and acceptance of the source tests are as follows:
 - Lube Grade Dryer Stack; performed - October 28, 1998; accepted - January 14, 1999 at a maximum operating rate of 850 lbs/hr
 - Jet Mill Baghouse Stack; performed - October 27, 1998; accepted - January 14, 1999 at a maximum operating rate of 1600 lbs/hr
 - Storage Bin Baghouse Stack; performed - June 5, 1997; accepted - June 16, 1998 at a maximum operating rate of 1038 lbs/hr
 - Pancake Mill Feed Bin Baghouse Stack; performed - May 25, 1999; accepted - September 16, 1999 at a maximum operating rate of 850 lbs/hr

Appendix A lists the permit conditions in a modified Tier I form that TCMC requested to make the Permit more beneficial to TCMC's purposes. This appendix does not take precedence over the Permit, but is provided to assist TCMC in complying with permit requirements.

Appendix B contains a map of the facility boundary. In accordance with the Permit, no visible emissions shall be seen leaving the mine site boundary. TCMC requested that the map be a part of the Permit, but doing so would require TCMC to amend their permit when the mine site boundary changes. Including the map in the technical memo reduces confusion over where the mine site boundary is, since TCMC does not own all of the land within the boundary but leases part of it from the Forest Service.

TCMC requested the Permit be issued in WORD 97 form. Unfortunately, this is not possible because I do not have access to WORD 97 at this time. The Permit and all related documents are processed in WordPerfect.

DISCUSSION

1. Emission Estimates

Actual emissions at the TCMC facility are not changing with this application. The emission limits in this Tier II Operating Permit are being amended to include emission limit changes for the pebble lime baghouse, SPL-1, and portable crusher, S-C2 that were made in the PTC issued March 3, 1999. The emission limits for Boiler #1, S-B1, and Hot Oil Boiler #1, S-B2, were separated. The Tier II Permit, issued on February 25, 1997, listed the boilers as having a common stack, which they do not. The emissions calculations were already done for the individual boilers in the February 25, 1997, Technical Memo, Appendix A. The permitted limit for the combined source was reproporioned between the two (2) sources according to the calculations done in the 1997 tech memo.

2. Modeling

The emission limit changes were modeled as part of the March 3, 1999 PTC. Therefore, additional modeling is not required.

3. Area Classification

The TCMC facility, Custer County Idaho, is located in AQCR 63, Zone 11. The area is classified as attainment or unclassifiable for all federal and state criteria air pollutants.

4. Facility Classification

Without federally enforceable permit conditions, this facility would be considered major for NOx and PM, as defined in IDAPA 16.01.01.006.55. The facility is not considered major, however, because the Permit limits the facility's potential to emit below 100 T/yr for NOx and PM. The facility is not a designated facility as defined in IDAPA 16.01.01.006.27. The Standard Industrial Classification Code (SIC) for the facility is 1061.

5. Regulatory Review

This OP is subject to the following permitting requirements:

a.	<u>IDAPA 16.01.01.401</u>	Tier II Operating Permit
b.	<u>IDAPA 16.01.01.403</u>	Permit Requirements for Tier II Sources
c.	<u>IDAPA 16.01.01.404.01.c</u>	Opportunity for Public Comment
d.	<u>IDAPA 16.01.01.404.04</u>	Authority to Revise or Renew Operating Permits
e.	<u>IDAPA 16.01.01.406</u>	Obligation to Comply
f.	<u>IDAPA 16.01.01.470</u>	Permit Application Fees for Tier II Permits
g.	<u>IDAPA 16.01.01.625</u>	Visible Emission Limitation

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- h. IDAPA 16.01.01.650
- i. 40 CFR 60 Subpart LL

General Rules for the Control of Fugitive Dust
Standards of Performance for Nonmetallic Mineral
Processing Plants

FEES

Fees apply to this facility in accordance with IDAPA 16.01.01.470. The facility is subject to permit application fees of \$500 for this revised Tier II OP. Fee payment was received on October 13, 1999.

RECOMMENDATIONS

Based on the review of the application materials and all applicable state and federal regulations, staff recommends that DEQ issue an amended Tier II OP to Thompson Creek Mining Company. A public comment period is not required, in accordance with IDAPA 16.01.01.404.04, because allowable emissions are not increasing.

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cc: P. Rayne/AFS
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Z. Klotovich, TSPO
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Source File
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APPENDIX A

Source: Portable Crusher

Emission Limits: PM: 15 T/yr (1.1)
 Opacity: <20% (1.2)
 No fugitive emissions at boundary (1.4)

Operating Requirements	Monitoring Requirements	Monitoring Method	Monitoring Frequency	Reporting Requirements	Record-keeping Requirements
PM and PM-10 emissions shall be reasonably controlled (1.3, 2.1)	Record hours of water spray operation (3.0)	Hour meter	Once per calendar month (3.0)	Monthly report to file of hours of water spray operation (4.0)	Five years (4.0)
Throughput: <700,000 tons per 12-month period (2.2)	Record throughput to the portable rock crusher (3.0)	Weight	Once per calendar month (3.0)	Monthly report to file of monthly and previous 12-month throughput (4.0)	Five years (4.0)
Maintain opacity at <20% (1.2)	Observe Opacity (1.2)	Method 9	a	a	a
Prevent fugitive dust emissions from crossing the property boundary (1.4)	Observe fugitive emissions (1.4)	Method 22	b	b	b

- a) Recording, and reporting are optional; opacity shall be not exceed 20% for more than 3 minutes per any 60-minute period.
 b) Recording, and reporting are optional; visible emissions shall not be observed at the property boundary for more than 3 minutes per any 60-minute period.

Source: Primary (Gyratory) Crusher

Emission Limits: PM: 390 lbs/day (1.1)
 45 T/yr (1.1)
 Opacity: <20% (1.2)

Operating Requirements	Monitoring Requirements	Monitoring Method	Monitoring Frequency	Reporting Requirements	Record-keeping Requirements
PM and PM-10 emissions shall be reasonably controlled (1.3)					
Throughput: <78,000 T/day (2.1); <16,242,600 T/yr ¹ (2.2)	Record material processed in T/day (3.0)	Weight	Daily (3.0) Monthly - consecutive 12-month total (3.0)	Monthly report to file of daily throughput and previous 12-month throughput (4.0)	Five years (4.0)
Maintain opacity at <20% (1.2)	Observe Opacity (1.2)	Method 9	a	a	a

¹ Any consecutive 12-month period.

a) Recording, and reporting are optional; opacity shall be not exceed 20% for more than 3 minutes per any 60-minute period.

Source: Overland Conveyor Drive House

Emission Limits: PM: 93.6 lbs/day (1.1)
 12.0 T/yr (1.1)
 Opacity: <20% (1.2)

Operating Requirements	Monitoring Requirements	Monitoring Method	Monitoring Frequency	Reporting Requirements	Record-keeping Requirements
PM and PM-10 emissions shall be reasonably controlled (1.3)					
Throughput: <78,000 T/day (2.1); <16,242,600 T/yr ¹ (2.2)	Record material processed in T/day (3.0)	Weight	Daily (3.1) Monthly - consecutive 12-month total (3.1)	Monthly report to file of daily throughput and previous 12-month throughput (4.0)	Five years (4.0)
Maintain opacity at <20% (1.2)	Visible Emissions (3.2)	Method 9	Once per calendar month (3.2)	Monthly report to file of opacity (4.0)	Five years (4.0)

¹ Any consecutive 12-month period.

Source: East and West Ore Feeders

Emission Limits: PM: 48 lbs/day (1.1)
8.8 T/yr (1.1)
Opacity: <20% (1.2)

Operating Requirements	Monitoring Requirements	Monitoring Method	Monitoring Frequency	Reporting Requirements	Record-keeping Requirements
PM and PM-10 emissions shall be reasonably controlled (1.3)					
Throughput: <40,000 T/day (2.1); <14,600,000 T/yr ¹ (2.2)	Record material processed in T/day (3.0)	Weight	Daily (3.0) Monthly - consecutive 12-month total (3.0)	Monthly report to file of daily throughput and previous 12-month throughput (4.0)	Five years (4.0)
Maintain opacity at <20% (1.2)	Observe Opacity (1.2)	a	a	a	a

¹ Any consecutive 12-month period.

a) Recording, and reporting are optional; opacity shall be not exceed 20% for more than 3 minutes per any 60-minute period.

Source: Holoflite Dryer #1

Emission Limits: PM: 7.9 lbs/day (1.1)
 1.0 T/yr (1.1)
 Opacity: <20% (1.2)

Operating Requirements	Monitoring Requirements	Monitoring Method	Monitoring Frequency	Reporting Requirements	Record-keeping Requirements
PM and PM-10 emissions shall be reasonably controlled (1.3)					
Throughput: <160 T/day (2.1); <81,030 T/yr ¹ (2.2)	Record material processed in T/day (3.2)	Weight	Daily (3.2) Once per calendar month the previous 12-month throughput (3.2)	Monthly report to file of daily throughput and previous 12-month throughput (4.0)	Five years (4.0)
Maintain opacity at <20% (1.2)	Observe Opacity (1.2)	Method 9	Once per calendar month (3.1)	Monthly report to file of opacity (4.0)	Five years (4.0)

¹ Any consecutive 12-month period.

Source: Holoflite Dryer #2 and Rotary Kiln

Emission Limits: (Lube Grade Dryer Stack)

TSP:	0.05 g/dscm (1.1)	PM-10:	0.025 lb/hr (1.2)
PM:	0.025 lb/hr (1.1)		0.111 T/yr (1.2)
	0.111 T/yr (1.1)		
VOC:	2.6 lb/hr (1.3)		
	10.3 T/yr (1.3)		
Opacity:	<20% (1.4)		
	No visible emissions outside building (1.5)		

Operating Requirements	Monitoring Requirements	Monitoring Method	Monitoring Frequency	Reporting Requirements	Record-keeping Requirements
Emissions from holoflite dryer #2 and rotary kiln each controlled by a venturi scrubber and vented through a common stack controlled by an electrostatic precipitator (2.1)					
PM and PM-10 emissions shall be reasonably controlled (1.6)					
Dryer #2 Process Rate; <2,000 lb/hr MoS (2.2)	Record material processed in lb/day (3.4)	See 40 CFR 60, Subpart LL (3.1)	Daily (3.4)	In accordance with 40 CFR 60 Subpart LL (4.1)	
Rotary Kiln process rate; <2,000 lb/hr MoS (2.2)	Record material processed in T/day (3.4)	See 40 CFR 60, Subpart LL (3.1)	Daily (3.4)	In accordance with 40 CFR 60 Subpart LL (4.1)	
Dryer #2 flowrate and pressure drop must be with in $\pm 30\%$ of performance test average (2.3)	Calibrate, maintain , and operate a continuous monitoring device (3.2, 3.3)		Once per calendar week (4.2)	Semiannual reports to DEQ of once per calendar week measurements (only when measurements are out of limits) (4.3) per Subpart LL (4.1)	Five years (4.4)
Rotary kiln flowrate and pressure drop must be with in $\pm 30\%$ of performance test average (2.3)	Calibrate, maintain , and operate a monitoring device (3.2, 3.3)		Once per calendar week (4.2)	Semiannual reports to DEQ of once per calendar week measurements (only when measurements are out of limits) (4.3) per Subpart LL (4.1)	Five years (4.4)
	Conduct Initial performance test (3.5)	Method 5 (40 CFR 60, Appendix A) Method 17 (3.5)	Once - consisting of 3 runs (3.5)	Per Subpart LL (4.1)	Five years (4.4)

Source: Jet Mill and MoS₂ Packaging Area

Emission Limits: Jet Mill Baghouse

TSP: 0.05 g/dscm (1.1)
 PM: 0.303 lb/hr (1.1)
 0.315 T/yr (1.1)
 PM-10: 0.303 lb/hr (1.2)
 0.315 T/yr (1.2)
 Opacity: <7% (1.3)
 Milling circuit opacity: <10% (1.7)

Storage Bin Baghouse

TSP: 0.056 g/dscm (1.4)
 PM: 0.084 lb/hr (1.4)
 0.087 T/yr (1.4)
 PM-10: 0.084 lb/hr (1.5)
 0.087 T/yr (1.5)
 Opacity: <7% (1.6)
 Milling circuit opacity: <10% (1.7)

Operating Requirements	Monitoring Requirements	Monitoring Method	Monitoring Frequency	Reporting Requirements	Record-keeping Requirements
PM and PM-10 emissions shall be reasonably controlled (2.3)					
Jet mill MoS ₂ process rate: <1,600 lb/hr (2.1)	Record average process rate for each shift in lb/hr (3.1)		Daily (3.1)	Monthly report (4.0)	Five years (4.0)
Emissions from jet mill and storage bins will be vented through baghouses (2.2)	Performance Tests (3.2)	Method 5 (or equivalent); Method 9 (3.2)			
Maintain opacity from baghouse stacks <7% (1.3, 1.6)	Observe Opacity (1.3, 1.6)	Method 9 (1.3, 1.6)	a	a	a
Maintain opacity from milling circuit at <10% (1.7)	Observe Opacity (1.7)	Method 9 (1.7)	a	a	a

a) Recording, and reporting are optional

Source: Super Fine Grade Molybdenum Production Circuit

Emission Limits:

Pancake Mill Feed Bin

PM: 0.05 g/dscm (1.1)
 0.013 lb/hr (1.1)
 0.028 T/yr (1.1)
 Opacity: <7% (1.3)
 Milling circuit opacity: <10% (1.4)

Storage Bin

PM: 0.05 g/dscm (1.2)
 0.078 lb/hr (1.2)
 0.17 T/yr (1.2)
 Opacity: <7% (1.3)
 Milling circuit opacity: <10% (1.4)

Operating Requirements	Monitoring Requirements	Monitoring Method	Monitoring Frequency	Reporting Requirements	Record-keeping Requirements
Conveyance rate; <850 lb/hr <284 T/yr ¹ (2.1)	Monitor tons of material conveyed (3.1)	Weight	Daily (3.1) Monthly - consecutive 12-month total (3.1)	Monthly report to file (4.1)	Five years (4.1)
Pressure drop across control devices shall not fall below lowest average change in pressure of performance test run and shall not go above manufacturer's specifications. (2.3)	Continuously measure pressure drop across control devices (2.2)	Manometer	Once per calendar week (3.2)	Monthly report to file (4.1)	Five years (3.2)
	Performance Test (3.3)	Permit General Provision F; IDAPA 16.01.01.157 (pancake mill feed bin) (3.2)		Test Protocol (optional) (4.3) Test Report within 30 days of test (4.4)	
Maintain opacity at <7% (1.3)	Observe Opacity (1.3)	Method 9	a	a	a
Maintain opacity from milling circuit at <10% (1.4)	Observe Opacity (1.4)	Method 9	a	a	a

¹ Any consecutive 12-month period.

a) Recording, and reporting are optional

Source: Pebble Lime Baghouse

Emission Limits: PM: 0.26 lb/hr (1.1)
 0.5 T/yr (1.1)
 Opacity: <20% (1.2)

Operating Requirements	Monitoring Requirements	Monitoring Method	Monitoring Frequency	Reporting Requirements	Record-keeping Requirements
PM and PM-10 emissions shall be reasonably controlled (1.3)					
Process rate: <12.0 T/hr (2.0)	Record tons of limestone processed per hour Record hours of operation per shift (3.1, 3.2, 3.3)	See Section 3.1 of permit	Hourly, per shift (3.1)	Monthly report to file (4.0)	Five years (4.0)
Process rate: <5,000 T/yr ¹ (2.0)	Record tons of limestone processed for month and consecutive 12-month period (3.4)		Monthly (3.4)	Monthly report to file (4.0)	Five years (4.0)
Maintain opacity at <20% (1.2)	Observe Opacity (1.2)	Method 9	Monthly (3.4)	Monthly report to file (4.0)	Five years (4.0)

¹ Any consecutive 12-month period.

Source: Boiler #1 and Hot Oil Boiler #1

Emission Limits:	Boiler #1	Hot Oil Boiler #1
TSP:	0.05 g/dscm (1.2)	TSP: 0.05 g/dscm (1.2)
PM:	0.04 lb/hr (1.1)	PM: 0.07 lb/hr (1.1)
	0.15 T/yr (1.1)	0.35 T/yr (1.1)
NOx:	0.27 lb/hr (1.1)	NOx: 0.66 lb/hr (1.1)
	1.18 T/yr (1.1)	2.89 T/yr (1.1)
Opacity:	<20% (1.3)	Opacity: <20% (1.3)

Operating Requirements	Monitoring Requirements	Monitoring Method	Monitoring Frequency	Reporting Requirements	Record-keeping Requirements
Sulfur content of fuel No. 1 fuel: <0.3% sulfur No. 2 fuel: <0.5% sulfur (2.1)	Record sulfur content of fuel (3.2)	Quarterly analyzation of fuel storage tanks (3.2)	Quarterly (3.2)	Monthly report to file (4.0)	Five years (4.0)
Fuel Combustion Rate: Boiler #1: <289,080 gal/yr ¹ Hot Oil Boiler: <118,260 gal/yr ¹ (2.2)	Record amount of fuel burned (3.1)	Flow meter	Once per calendar month for that month and for the previous 12 months(3.1)	Monthly report to file (4.0)	Five years (4.0)
Maintain opacity at <20% (1.2)	Observe Opacity (1.3)	Method 9	a	a	a

¹ Any consecutive 12-month period.

a) Recording, and reporting are optional; opacity shall be not exceed 20% for more than 3 minutes per any 60-minute period.

Source: Motivator

Emission Limits: PM: 0.2 lb/hr (1.1)
 0.35 T/yr (1.1)
 NOx: 35.8 lb/hr (1.1)
 53.64 T/yr (1.1)
 Opacity: <20% (1.2)

Operating Requirements	Monitoring Requirements	Monitoring Method	Monitoring Frequency	Reporting Requirements	Record-keeping Requirements
Sulfur content of fuel No. 1 fuel: <0.3% sulfur No. 2 fuel: <0.5% sulfur (2.1)	Record sulfur content of fuel (3.1)	Quarterly analyzation of fuel storage tanks (3.1)	Quarterly (3.1)	Monthly report to file (4.0)	Five years (4.0)
Operation Rate: <3,000 hr/yr ¹ (2.2)	Record hours of operation (3.2)	Hour meter	Once per calendar month for that month and for the previous 12 months (3.1)	Monthly report to file (4.0)	Five years (4.0)
Maintain opacity at <20% (1.2)	Observe Opacity (1.2)	Method 9	a	a	a

¹ Any consecutive 12-month period.

a) Recording, and reporting are optional; opacity shall be not exceed 20% for more than 3 minutes per any 60-minute period.

Source: Mill Auxiliary Generator

Emission Limits:

PM:	0.6 lb/hr (1.1)
	0.14 T/yr (1.1)
NOx:	8.2 lb/hr (1.1)
	2.05 T/yr (1.1)
Opacity:	<20% (1.2)

Operating Requirements	Monitoring Requirements	Monitoring Method	Monitoring Frequency	Reporting Requirements	Record-keeping Requirements
Sulfur content of fuel No. 1 fuel: <0.3% sulfur No. 2 fuel: <0.5% sulfur (2.1)	Record sulfur content of fuel (3.1)	Quarterly analyzation of fuel storage tanks (3.1)	Quarterly (3.1)	Monthly report to file (4.0)	Five years (4.0)
Operation Rate: <500 hr/yr ¹ (2.2)	Record hours of operation (3.2)	Hour meter	Once per calendar month for that month and for the previous 12 months(3.2)	Monthly report to file (4.0)	Five years (4.0)
Maintain opacity at <20% (1.2)	Observe Opacity (1.3)	Method 9	a	a	a

¹ Any consecutive 12-month period.

a) Recording, and reporting are optional; opacity shall be not exceed 20% for more than 3 minutes per any 60-minute period.

Source: Pumpback Generator

Emission Limits: PM: 1.0 lb/hr (1.1)
 0.25 T/yr (1.1)
 NOx: 13.9 lb/hr (1.1)
 3.49 T/yr (1.1)
 Opacity: <20% (1.2)

Operating Requirements	Monitoring Requirements	Monitoring Method	Monitoring Frequency	Reporting Requirements	Record-keeping Requirements
Sulfur content of fuel No. 1 fuel: <0.3% sulfur No. 2 fuel: <0.5% sulfur (2.1)	Record sulfur content of fuel (3.1)	Quarterly analyzation of fuel storage tanks (3.1)	Quarterly (3.1)	Monthly report to file (4.0)	Five years (4.0)
Operation Rate: <500 hr/yr ¹ (2.2)	Record hours of operation (3.2)	Hour meter	Once per calendar month for that month and for the previous 12 months(3.2)	Monthly report to file (4.0)	Five years (4.0)
Maintain opacity at <20% (1.2)	Observe Opacity (1.3)	Method 9	a	a	a

¹ Any consecutive 12-month period.

a) Recording, and reporting are optional; opacity shall be not exceed 20% for more than 3 minutes per any 60-minute period.

APPENDIX B

